# AGENDA

# Climate Change Prediction Program
# Science Team Meeting

## *Sunday April 23*

5:00-7:00 pm Early Registration in Lobby

## *Monday April 24*

8:00 Registration Continues

8:00 Poster Setup for Session I

8:30 Opening Remarks (D. Bader, A. Bamzai)

8:45 Invited Talk – Dr. David Thomassen, Acting Associate Director for Biological and Environmental Research, Office of Science, US Department of Energy

9:15 Session I — Climate Data Analysis, Dynamics, and Theory

| | |
|---|---|
| R. Vose | A Comparison of observed and Model-Produced Trends in Global Maximum and Minimum Temperature |
| A. Miller/SIO | Predictability and Diagnosis of Low-Frequency Climate Processes in the Pacific |
| N. Schneider | Decadal Climate Variations Simulated by the PCM |
| R. Lindzen | New Tests of the Iris Effect |
| P. Stone | Estimating PDFs of Climate System Properties including Natural and Anthropogenic Forcings and Implications for 21$^{st}$ Century Climate Change Predictions |
| Z. Liu | Towards the Prediction of Decadal to Multi-Century Climate Processes in High-Throughput Earth System Models |
| W.-C. Wang | Historical Climate Over East Asia: Diagnostics and Model Simulations |
| R. Nair/H. Tufo | A Scalable Discontinuous Galerkin Atmospheric Dynamical Core* |

10:30 Break and Poster Setup for Session II

| | | |
|---|---|---|
| 11:00 | Session II | Atmospheric and Land Surface Modeling |
| | W. Gutowski | Continuous Dynamic Grid Adaptation on a Global Atmospheric Model |
| | R. Dickinson | Scaling Between Land and Atmospheric Processes |
| | M. Fox-Rabinovitz | Decadal Climate Studies with Enhanced Variable and Uniform Resolution GCMs: Stretched-Grid Model Intercomparison Project |
| | J. Penner | Climate Modeling Using Adaptive Grids |
| | J. Song | Representation of Root Distribution in Response to Water Stress |
| | M. Sun | 2D Cloud Structure and Their Cloud Radiative Forcing Change over the Tropical Region During 97/98 El Nino |
| | X. Wu/G. Zhang | Improvement to Convective Process in CCSM and its Impact on Climate Simulations |
| 12:30 | Lunch | |
| 1:30 | Setup for Session III | |
| 2:00 | Session III | Overview of CCSM Software Engineering – P. Jones and J. Drake |
| | B. Collins | CCSM4 Development Plans |
| | P. Worley | Performance and Performance Engineering of the Community Atmosphere Model |
| | F. Hoffman/P. Jones | Software Engineering and Performance of CLM, POP and CICE |
| | R. Jacob | SWE for the Earth System Model |
| | P. Duffy | High Resolution Atmospheric Simulations |
| | J. Kim | Automatic Differentiation for CAM and CICE |
| | S. Ghan | Subgrid Orography and Downscaling of IPCC Scenarios |
| | Y. He | Utility Upgrades to Support Single Executable and Parallel I/O in CCSM |
| 3:30 | Break and Setup for Session IV | |
| 4:00 | Session IV | SciDAC CCSM Biogeochemistry |
| | S. Elliott | Ocean Ecosystem Modeling and Biogeochemistry |
| | D. Erickson | A Coupled Biogeochemistry – Physical Climate Simulation |
| | J.-F. Lamarque/ P. Cameron-Smith | Atmospheric Chemistry Simulations |
| | F. Hoffman | Carbon Model Intercomparison (C4MIP) |
| 5:30 | Adjourn for Day | |
| 6:00 | No Host Bar | |
| 6:30 | Dinner – Speaker Warren Wiscombe, Chief Scientist for ARM | |

## *Tuesday April 25*

| | | |
|---|---|---|
| 8:00 | Setup for Session V | |
| 8:30 | Invited Talk - Ron Stouffer – Model Development and Application at GFDL | |
| 9:30 | Session V | NCAR Cooperative Agreement (W. Washington) |
| 11:00 | Break and Setup for Session VI | |
| 11:30 | Session VI | PCMDI (D. Bader) |
| | K. Halliday | Climate Science Software at PCMDI |
| | K. Taylor | Challenges in Sharing Climate Model Output in Support of IPCC Assessments |
| | G. Potter | Climate Model Forecast Experiments for TOGA-COARE |
| | C. Covey | Diagnosis and Intercomparison of Climate Models with Interactive Biogeochemistry |
| | P. Gleckler | The Effect of Volcanic Eruptions on Ocean Heat Content and Thermal Expansion in the AR4 Simulations |
| | K. Achutarao | Ocean Heat Content Variability: Reconciling Models and Observations |
| | K. Achutarao | Improvements in ENSO Simulation in the AR4 Models (Compared to CMIP2) |
| | K. Sperber | Asian Summer Monsoon Intraseasonal Variability in ECHAM4/OPYC |
| 1:00 | Open Poster Session – Lunch Provided | |
| 1:30 | Session VII Setup | COSIM and Regime Change (P. Jones, LANL) |
| | J. Dukowicz | A New Type of Hybrid Eulerian/Lagrangian Ocean Model |
| | W. Weijer | The Application of Implicit Methods in Ocean Models |
| | B. Wingate | On the Interaction of ALE Vertical Coordinates and KPP |
| | E. Hunke | GM vs. Biharmonic Ocean Mixing in the Arctic |
| | E. Hunke/ M. Maltrud | Highlights from AOMIP |
| | M. Hecht | Sensitivity of NA Circulation to Topography and Sub-Gridscale |
| | B. Lipscomb | Ridging, Strength and Stability in High-Resolution Sea Ice Models |
| | M. Peterson | The LANS-Alpha Model of Sub-Grid Scale Turbulence in the POP Ocean Model |
| 3:00 | Break and Setup for Session VIII | |

| | | |
|---|---|---|
| 3:30 | Session VIII | Ocean Modeling and Dynamics |
| | K. Bryan | Gent-McWilliams Parameterization in a Hybrid Coordinate Ocean Model |
| | W. Maslowski | Fine Resolution Ocean, Sea Ice, and Coupled Ice-Ocean Modeling |
| | J. McClean | Fine Resolution Ocean, Ice, and Coupled Ice-Ocean Modeling |
| | P. Cessi | Regimes of Thermocine Scaling: Where Do Eddies Matter? |
| | A. Robertson/ S. Kravtsov/ E. Simmonet | Studies of Regional-Scale Climate Variability and Change: Hidden Markov Models and Coupled Ocean-Atmosphere Modes |
| 5:00 | Adjourn for Day | |

## *Wednesday April 26*

| | | |
|---|---|---|
| 8:00 | Setup for Session IX | |
| 8:30 | Invited Talk | Ruby Leung - Update on Planning for the North American Regional Climate Change Assessment Program (NARCCAP) |
| 9:00 | Session IX | Climate Data Analysis and Model Applications |
| | R. Bradley | Climate Change Under Natural and Anthropogenic Forcing: Regional Climate Model Simulations for Central America and East Asia |
| | P.D. Jones (UEA) | Reasons for the Variability of the Influence of the NAO on Surface Temperature |
| | D. Lettenmaier | No Title Provided |
| | E. DeWeaver | The Arctic Circulation and Sea Ice Simulation in CCSM3, Plus Some High-Latitude Circulation Changes in the IPCC Scenario Integrations |
| | S. Nigam | No Title Provided |
| | M. Wehner | Changes in Temperature and Precipitation Extremes in the IPCC AR4 Models |
| | J. White/LCF | Status of the Leadership Computing Facility at ORNL |